V Namratha
1NT19IS180
C2 batch

Program – 1:

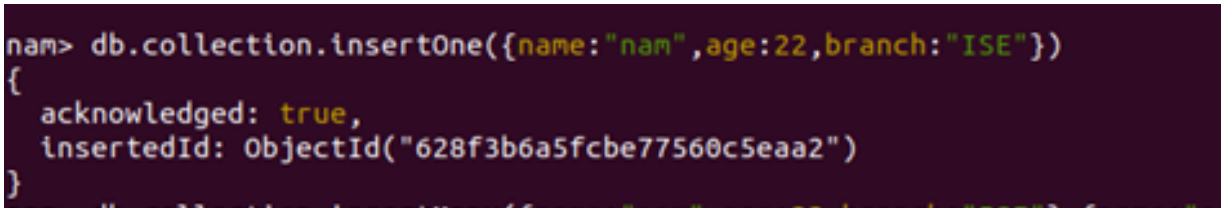
Creating database and collection.

```
test> use nam
switched to db nam
```

Inserting the values.

- Insert One:

```
nam> db.collection.insertOne({name:"nam",age:22,branch:"ISE"})
{
  acknowledged: true,
  insertedId: ObjectId("628f3b6a5fcbe77560c5eaa2")
}
```



- Insert Many:

```
nam>
db.collection.insertMany([{name:"nam",age:22,branch:"ISE"},{name:"sam",age:23,branch:"CSE"}
,{name:"ram",age:18,branch:"aero"}])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("628f3c235fcbe77560c5eaa3"),
    '1': ObjectId("628f3c235fcbe77560c5eaa4"),
    '2': ObjectId("628f3c235fcbe77560c5eaa5")
  }
}
```

Find operation

```
nam> db.collection.find({name:"ram"})
[
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa5"),
    name: 'ram',
    age: 18,
    branch: 'aero'
  }
]


nam> db.collection.find({})
[
  {
    _id: ObjectId("628f3b6a5fcbe77560c5eaa2"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa3"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa4"),
    name: 'sam',
    age: 23,
    branch: 'CSE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa5"),
    name: 'ram',
    age: 18,
    branch: 'aero'
  }
]
```

```
nam> db.collection.find({name:"ram"})
[
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa5"),
    name: 'ram',
    age: 18,
    branch: 'aero'
  }
]
nam> db.collection.find({})
[
  {
    _id: ObjectId("628f3b6a5fcbe77560c5eaa2"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa3"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa4"),
    name: 'sam',
    age: 23,
    branch: 'CSE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa5"),
    name: 'ram',
```

```
mongosh mongodb://
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa3"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa4"),
    name: 'sam',
    age: 23,
    branch: 'CSE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa5"),
    name: 'ram',
    age: 18,
    branch: 'aero'
  }
]
```

Update Operation

```
nam> db.collection.updateOne({name:"ram"},{$set:{age:27}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
```

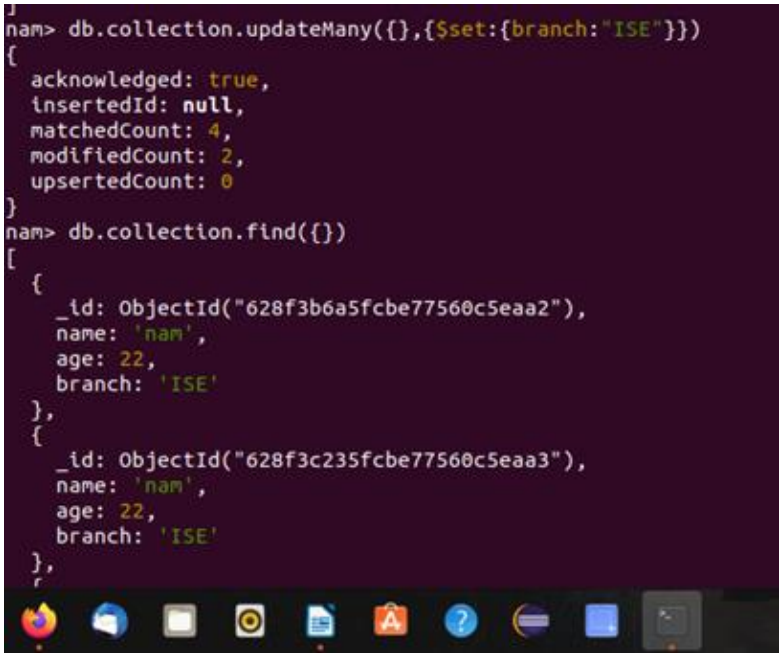
```
  upsertedCount: 0
}

nam> db.collection.find({})
[
  {
    _id: ObjectId("628f3b6a5fcbe77560c5eaa2"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa3"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa4"),
    name: 'sam',
    age: 23,
    branch: 'CSE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa5"),
    name: 'ram',
    age: 27,
    branch: 'aero'
  }
]
```

Update Many Operation

```
nam> db.collection.updateMany({},{$set:{branch:"ISE"}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 4,
  modifiedCount: 2,
  upsertedCount: 0
}
nam> db.collection.find({})
[
  {
    _id: ObjectId("628f3b6a5fcbe77560c5eaa2"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa3"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
```

```
    _id: ObjectId("628f3c235fcbe77560c5eaa4"),
    name: 'sam',
    age: 23,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa5"),
    name: 'ram',
    age: 27,
    branch: 'ISE'
  }
]
```



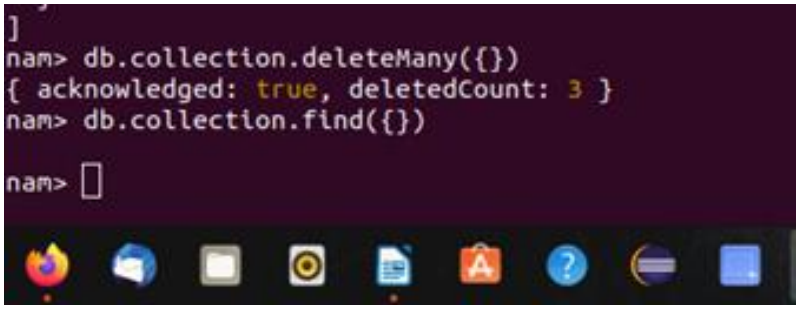
Delete Operation

```
nam> db.collection.deleteOne({name:"ram"})
{ acknowledged: true, deletedCount: 1 }
nam> db.collection.find({})
[
  {
    _id: ObjectId("628f3b6a5fcbe77560c5eaa2"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa3"),
    name: 'nam',
    age: 22,
    branch: 'ISE'
  },
  {
    _id: ObjectId("628f3c235fcbe77560c5eaa4"),
    name: 'sam',
    age: 23,
    branch: 'ISE'
  }
]
```

Delete Many Operation

```
nam> db.collection.deleteMany({})
{ acknowledged: true, deletedCount: 3 }
nam> db.collection.find({})
```

nam>

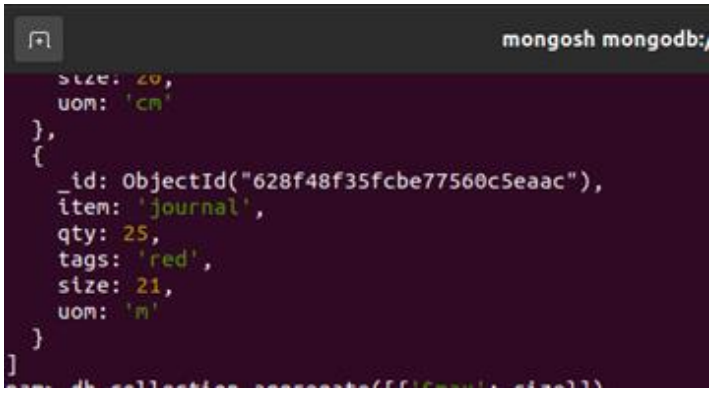


Aggregate Operations:

Sort

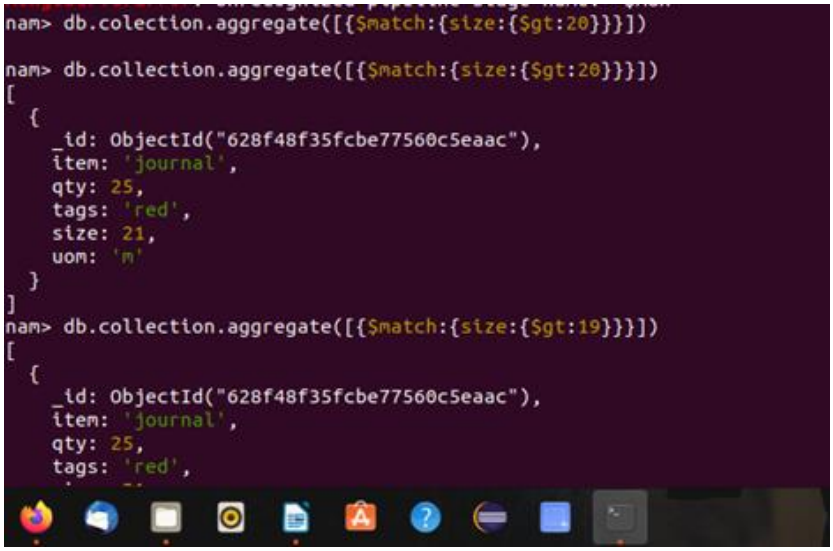
```
nam> db.collection.aggregate([{'$sort': {size: 1}}])
[
  {
    _id: ObjectId("628f48f35fcbe77560c5eaae"),
    item: 'mousepad',
    qty: 25,
    tags: 'gel',
    size: 19,
    uom: 'inches'
  },
  {
    _id: ObjectId("628f48f35fcbe77560c5eaad"),
    item: 'mat',
    qty: 85,
    tags: 'gray',
    size: 20,
    uom: 'cm'
  },
  {
    _id: ObjectId("628f48f35fcbe77560c5eaac"),
    item: 'journal',
    qty: 25,
    tags: 'red',
    size: 21,
    uom: 'm'
```

```
  }
]
```




```
nam> db.collection.aggregate([{$match:{size:{$gt:20}}}])
[
  {
    _id: ObjectId("628f48f35fcbe77560c5eaac"),
    item: 'journal',
    qty: 25,
    tags: 'red',
    size: 21,
    uom: 'm'
  }
]
nam> db.collection.aggregate([{$match:{size:{$gt:19}}}])
[
  {
    _id: ObjectId("628f48f35fcbe77560c5eaac"),
    item: 'journal',
```

```
    qty: 25,
    tags: 'red',
    size: 21,
    uom: 'm'
  },
  {
    _id: ObjectId("628f48f35fcbe77560c5eaad"),
    item: 'mat',
    qty: 85,
    tags: 'gray',
    size: 20,
    uom: 'cm'
  }
]
```



```
nam> db.students.aggregate([{$unwind:"$tags"}])

nam> db.collection.aggregate([{$unwind:"$tags"}])
[
  {
    _id: ObjectId("628f48f35fcbe77560c5eaac"),
    item: 'journal',
    qty: 25,
    tags: 'red',
    size: 21,
    uom: 'm'
  },
  {
    _id: ObjectId("628f48f35fcbe77560c5eaad"),
    item: 'mat',
    qty: 85,
    tags: 'gray',
    size: 20,
    uom: 'cm'
  },
  {
    _id: ObjectId("628f48f35fcbe77560c5eaae"),
    item: 'mousepad',
    qty: 25,
    tags: 'gel',
    size: 19,
    uom: 'inches'
  }
]
```